

Name: _____

Date: _____

1.1 Rounding a Handful of Beans

Lesson Objective: I can round two digit whole numbers to the nearest ten using a number line.

Mathematical Practice(s):

- MP.6 Use appropriate tools strategically.
- MP. 8 Look for and express regularity in repeated reasoning.

Essential Question(s):

- What is a rounded number?
- What does it mean to round numbers?
- What tools can we use to help us round numbers?

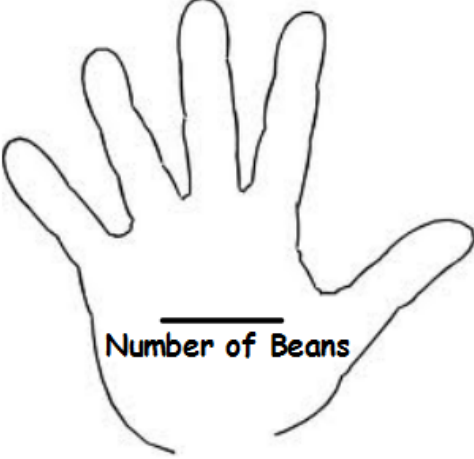
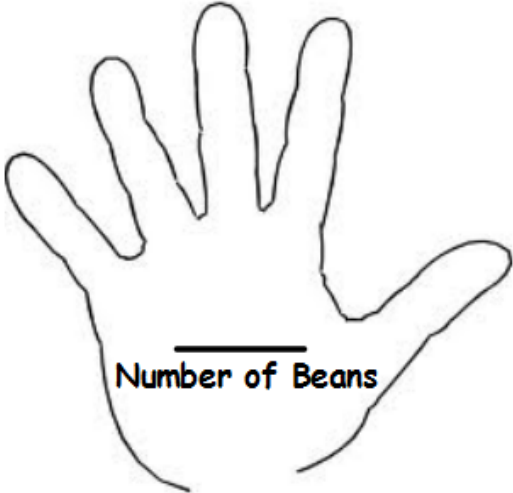
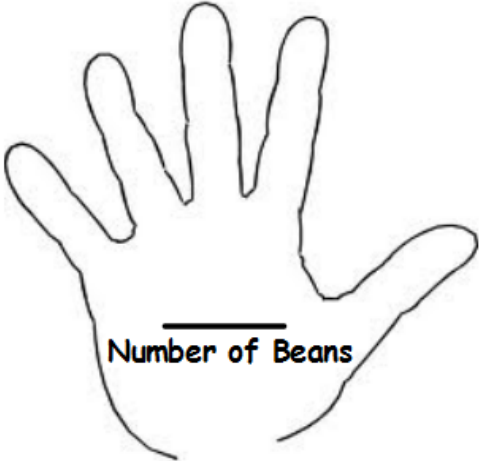
Vocabulary:

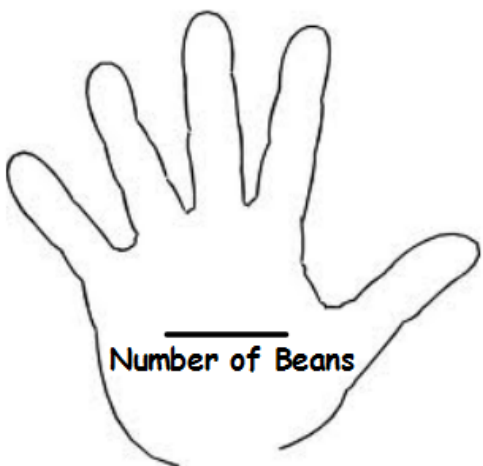
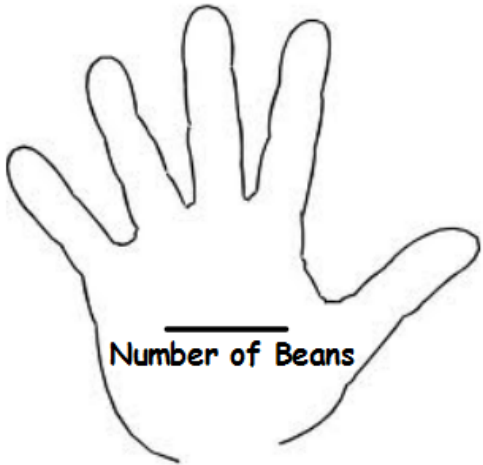
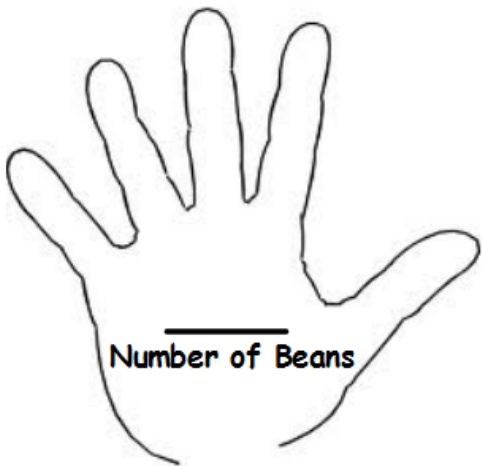
	Definition	Graphic/Visual
Round	When you round a number, you change the number to a more convenient “close to” number to make it easier to work with; rounded whole numbers will end with zero	
Multiples of 10	The numbers we say when we count by tens; 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130...	
Nearest ten	When rounding a number to the nearest ten, you are deciding which multiple of 10 it is closest to	

Math Huddle

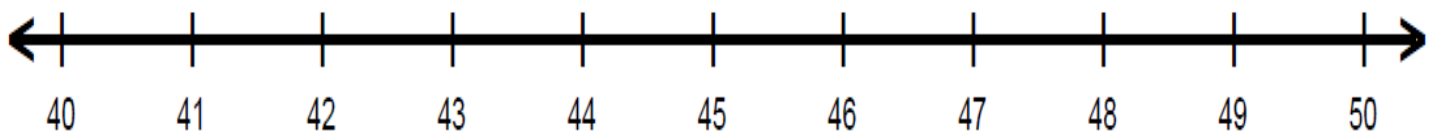
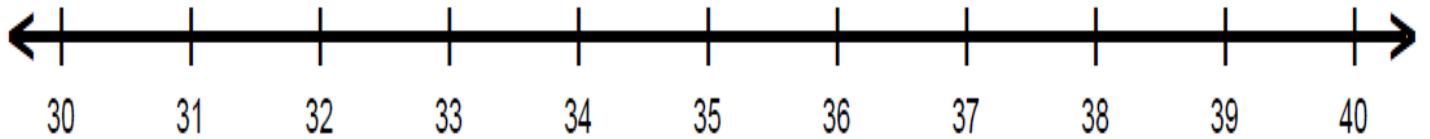
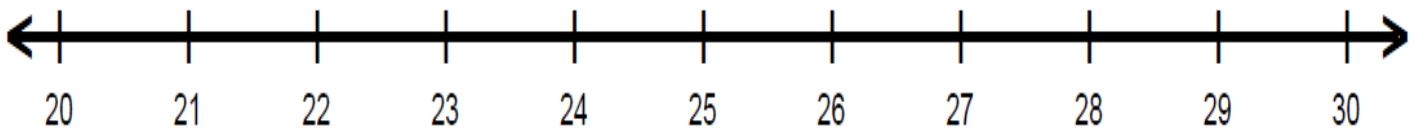
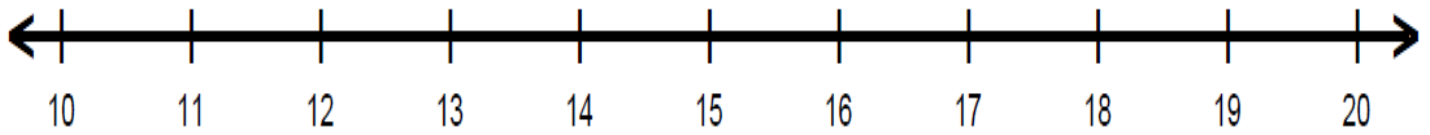
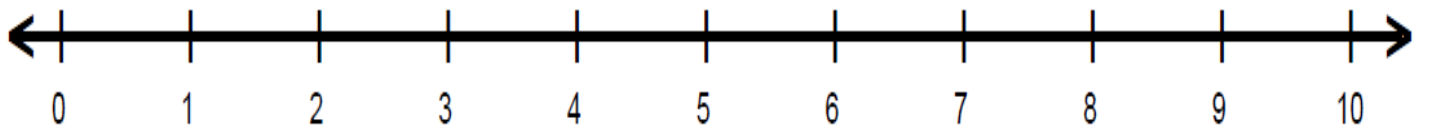
Exact Number	Rounded Number

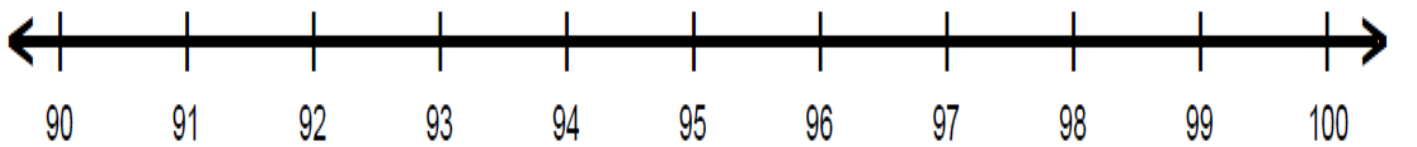
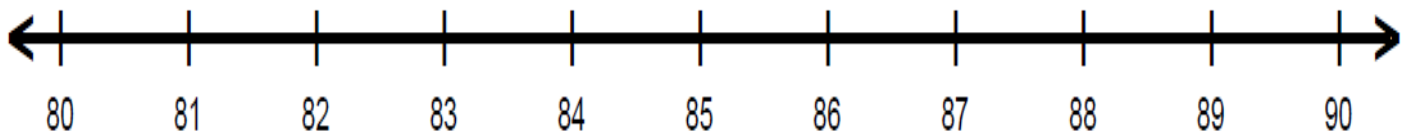
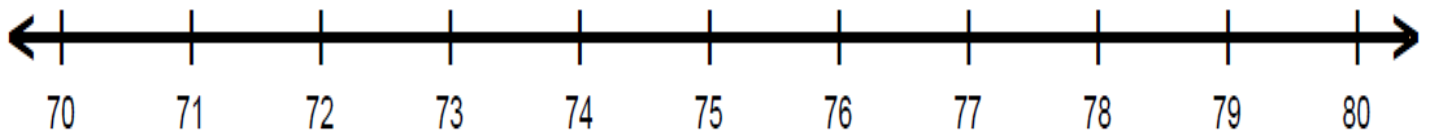
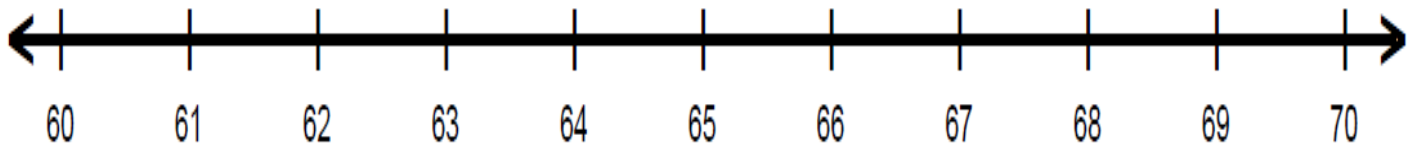
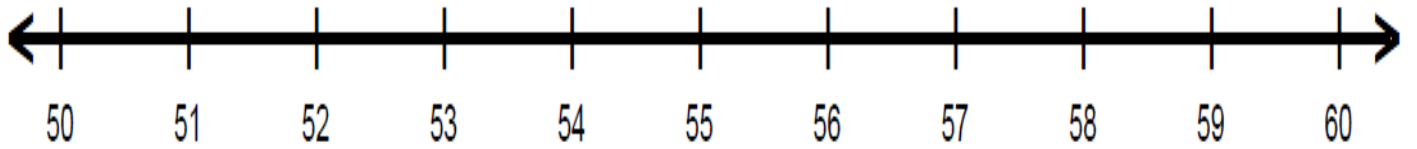
How can both of these numbers round to the same nearest ten?

<p>Exact Number of Beans in Handful</p>  <p>_____</p> <p>Number of Beans</p>	<p>_____ is between _____ and _____.</p> <p>It is closer to _____.</p>	<p>_____ <u>rounded</u> to the nearest ten</p> <p>is _____</p>
<p>Exact Number of Beans in Handful</p>  <p>_____</p> <p>Number of Beans</p>	<p>_____ is between _____ and _____.</p> <p>It is closer to _____.</p>	<p>_____ <u>rounded</u> to the nearest ten</p> <p>is _____</p>
<p>Exact Number of Beans in Handful</p>  <p>_____</p> <p>Number of Beans</p>	<p>_____ is between _____ and _____.</p> <p>It is closer to _____.</p>	<p>_____ <u>rounded</u> to the nearest ten</p> <p>is _____</p>

<p>Exact Number of Beans in Handful</p> 	<p>_____ is between _____ and _____.</p> <p>It is closer to _____.</p>	<p>_____ rounded to the nearest ten</p> <p>is _____</p>
<p>Exact Number of Beans in Handful</p> 	<p>_____ is between _____ and _____.</p> <p>It is closer to _____.</p>	<p>_____ rounded to the nearest ten</p> <p>is _____</p>
<p>Exact Number of Beans in Handful</p> 	<p>_____ is between _____ and _____.</p> <p>It is closer to _____.</p>	<p>_____ rounded to the nearest ten</p> <p>is _____</p>

MY NUMBER LINES





Name: _____
Date:_____

Math Journal

Ms. Smith grabbed a handful of beans. She said the number of beans she had in her hand rounded to 60. What could have been the exact number of beans in Ms. Smith’s hand? Use numbers, models, and words to explain how you know.

Who's Correct?

Justin grabbed 65 beans from a bag. He said 65 rounded to the nearest ten was 70. Antonio disagreed and said 65 rounded to the nearest ten was 60. Which student do you think rounded 65 correctly? Explain your reasoning.

Name: _____

Date: _____

1. 2 Shake, Rattle, and Roll

Lesson Objective: I can round two digit whole numbers to the nearest ten using hundreds chart and a number line.

Mathematical Practice(s):

- MP.6 Use appropriate tools strategically.
- MP. 8 Look for and express regularity in repeated reasoning.

Essential Question(s):

- What does it mean to round numbers?
- How do we round numbers? Why do we round numbers?
- What tools can we use to help us round numbers?

Vocabulary:

	Definition	Graphic/Visual
Round	When you round a number, you change the number to a more convenient “close to” number to make it easier to work with; rounded whole numbers will end with zero	
Multiples of 10	The numbers we say when we count by tens; 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130...	
Nearest ten	When rounding a number to the nearest ten, you are deciding which multiple of 10 it is closest to	
Estimate	Not an exact answer, but a “close to” answer often based on rounding. We make estimates to help us decide if an exact answer is reasonable or to quickly calculate an answer in our heads.	

Math Huddle

Exact Price	Rounded Price

Which column was quicker to add, the exact prices or the rounded prices? Why?

100 Chart

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100



Player 1

Round	Dice Numbers	Smallest Number	Nearest Multiple of 10	Largest Number	Nearest Multiple of 10	Estimated Sum
1						
2						
3						
4						
5						
6						
						Total

Player 2

Round	Dice Numbers	Smallest Number	Nearest Multiple of 10	Largest Number	Nearest Multiple of 10	Estimated Sum
1						
2						
3						
4						
5						
6						
						Total

ROUNDING TIC-TAC-TOE

50	20	50	80
90	60	30	20
40	100	10	40
80	30	70	90

Directions:

- 1.) Select a number from the below box.
- 2.) Round the number to the nearest ten.
- 3.) Find the rounded number that matches your answer on the tic-tac-toe board above.
- 4.) Put your **X** or **O** on the rounded number on the tic-tac-toe board. You may only put your mark on one number on the tic-tac-toe board, even if it appears more than once.
- 5.) The first player to have four in a row wins!

96	88	75	23
27	12	53	61
38	72	18	33
84	94	44	45

Math Journal

I am a number that rounds to 40. What can I be? Could I be another number? Justify your thinking.

Janelle's Numbers

Camille rolled two dice. She formed two numbers, a smallest number and a largest number. She rounded her numbers and estimated the sum to be 140. What could have been Camille's smallest number and largest number? Justify your thinking.

Name: _____

Date: _____

1.3 Rounds to 50

Lesson Objective: I can give examples of numbers that would round to a given nearest ten by using number lines and/or hundred charts

Mathematical Practice(s):

- MP.6 Use appropriate tools strategically.
- MP. 8 Look for and express regularity in repeated reasoning.

Essential Question(s):

- What tools can we use to help us round numbers?
- What patterns do we notice when rounding numbers?

Vocabulary:

	Definition	Graphic/Visual
Round	When you round a number, you change the number to a more convenient “close to” number to make it easier to work with; rounded whole numbers will end with zero	
Multiples of 10	The numbers we say when we count by tens; 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130...	
Nearest ten	When rounding a number to the nearest ten, you are deciding which multiple of 10 it is closest to	
Digit	A symbol used to make a number. We have 10 digits we use in our number system, 0, 1, 2, 3, 4, 5, 6, 7, 8, and 9. The number 153 is made up of 3 digits, 1, 5, and 3	

Math Huddle

- a.) I am a 2-**digit** number.
- b.) I have more tens than ones.
- c.) I round to 70.
- e.) I am an odd number.

When rounding to the nearest ten:

- What is the **smallest** whole number that will round to 50? Use models, numbers, and words to explain how you know.

- What is the **largest** whole number that will round to 50? Use models, numbers, and words to explain how you know.
- How many different whole numbers will round to 50? Use models, numbers, and words to explain how you know.

Be sure you answer each question.

[illegible]

Guess My Number Clues

<p>I am a 2-digit number. I have more tens than ones. I round to 70. I am an odd number. What number am I?</p>	<p>I am a number that rounds to thirty. The digit in my ones place is 2. What number am I?</p>
<p>I am number that rounds to fifty. The digit in my ones place in the number of legs on a dog. What number am I?</p>	<p>I am a number that rounds to twenty. The digit in my tens place is double of 1. The digit in my ones place is double of 4. What number am I?</p>
<p>I am a number that rounds to sixty. The digit in my ones place is the number of toes you have. What number am I?</p>	<p>I am a number that rounds to one hundred. The digit in my ones place and tens place is the same. What number am I?</p>

Rounding to the Nearest Ten

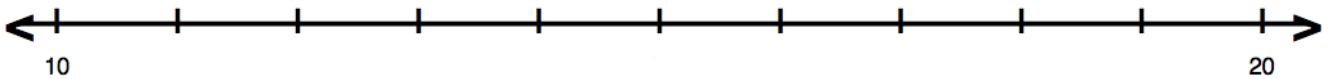
Directions: Use the number lines to help you answer each question.

1.) A West Indian manatee at the National Zoo is 14 feet long.



14 is between ____ and ____.

14 rounded to the **nearest ten** is _____

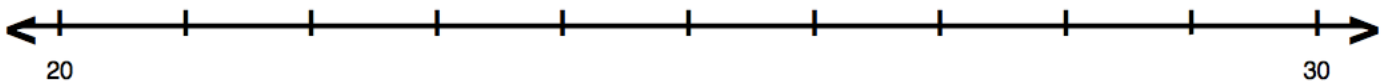


2.) A polar bear's foot is 28 centimeters long.



28 is between ____ and ____.

28 rounded to the **nearest ten** is _____

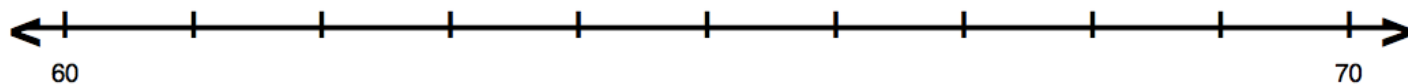


3.) An African Bull Elephant's tusk weighs 62 pounds.



62 is between ____ and ____.

62 rounded to the **nearest ten** is _____

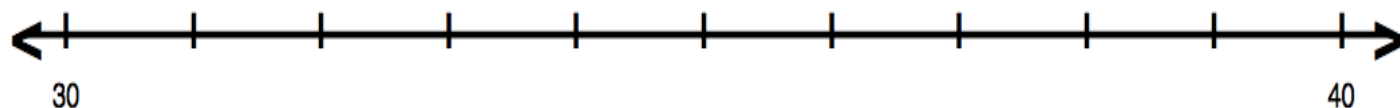


4.) A rhinoceros can run at a speed of 31 miles per hour.



31 is between ____ and ____.

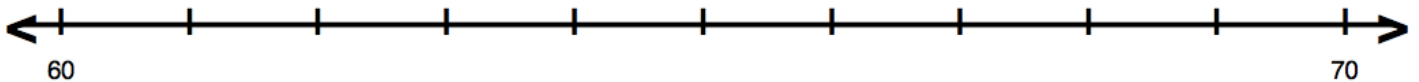
31 rounded to the **nearest ten** is _____.



5.) A hippopotamus can eat 68 kilograms of grass each night.



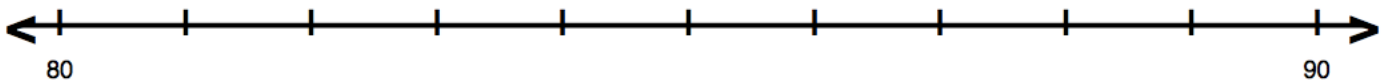
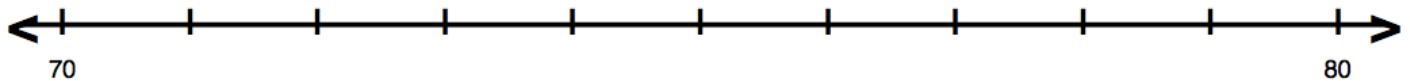
Janelle said a hippopotamus can eat about 60 kilograms of grass each night. Do you agree or disagree with Janelle? Explain.



6.) A park ranger at Yellowstone National Park explained the tail of an American Bison is about 80 centimeters long.

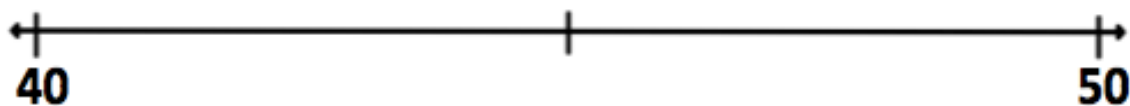


The exact length of an American Bison's tail could be _____.

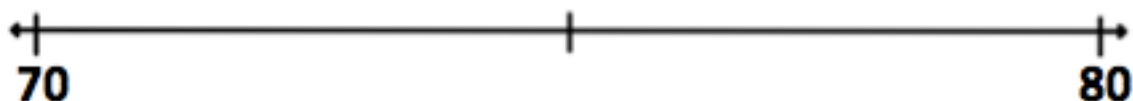


7.) Jasmine said 88 rounded to the nearest ten is 90. Her brother Jake, said 88 rounded to the nearest ten is 80. Draw a number line to prove Jasmine is correct.

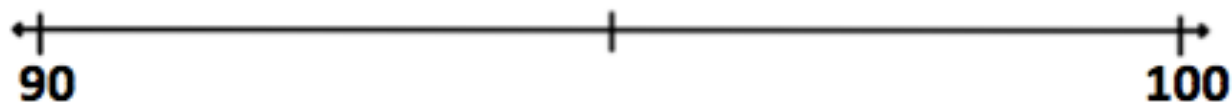
8.) Label the midpoint on the number line.



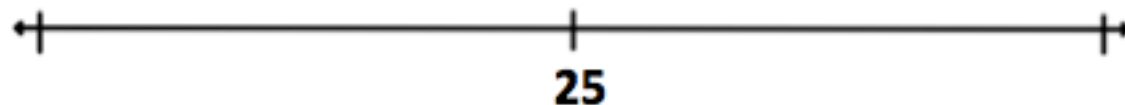
9.) Label the midpoint on the number line.



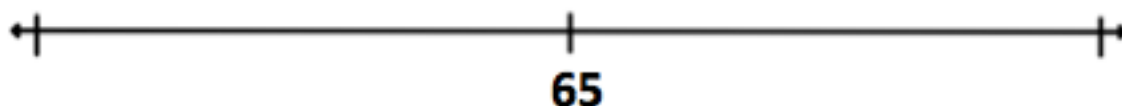
10.) Label the midpoint on the number line.



11.) Label the endpoints on the number line.



12.) Label the endpoints on the number line.



Rounding to the nearest ten

Work with a partner. Use a ruler and/or a meter stick to complete the chart below.

Object	Measurement (in cm)	The object measures between (which two tens)...	Length Rounded to the Nearest 10 cm
<i>Example:</i> My shoe	23 cm	____ 20 ____ and ____ 30 ____ cm	20 cm
Long side of a desk		_____ and _____ cm	
A new pencil		_____ and _____ cm	
Short side of a piece of paper		_____ and _____ cm	
Long side of a piece of paper		_____ and _____ cm	

Directions: Grab a handful of coins. Count the coins and record the amount in the first column. Then round your coin amount to the nearest ten.

Coin Amount	Between ____ and ____	Rounded to nearest ten
	_____ is between _____ and _____	
	_____ is between _____ and _____	
	_____ is between _____ and _____	
	_____ is between _____ and _____	
	_____ is between _____ and _____	

Math Journal

Jalynn told Tameka that she has about 50 stickers. Tameka has 48 stickers. Knowing that Jaylynn rounded her total, is it possible that Tameka has more stickers than Jalynn? Justify your thinking using words, pictures and numbers.

Name: _____

Date: _____

1.4 Animals at the Zoo

Rounding to the Nearest Hundred

Lesson Objective: I can locate numbers on a number line and round numbers to the nearest hundred using a number line and hundreds charts.

Mathematical Practice(s):

- MP.2 Reason abstractly and quantitatively
- MP.3 Construct reasonable arguments and critique the reasoning of others.

Essential Question(s):

- What is a rounded number?
- What does it mean to round numbers?
- What tools can we use to help us round numbers?

Vocabulary:

	Definition	Graphic/Visual
Nearest Hundred	When rounding a number to the nearest hundred, you are deciding which multiple of 100 it is closest to	
Midpoint (Halfway Number)	The number in the middle, or halfway between a starting and ending number.	



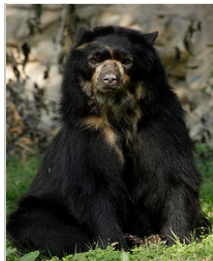
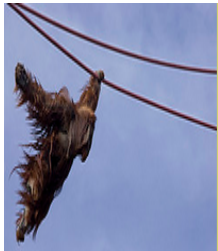
Math Huddle

Number of Ants	Doubles
1	
2	$1 + 1$ or 2×1
4	$2 + 2$ or 2×2
8	$4 + 4$ or 2×4
16	$8 + 8$ or 2×8
32	$16 + 16$ or 2×16
64	$32 + 32$ or 2×32
128	$64 + 64$ or 2×64
256	$128 + 128$ or 2×128
512	$256 + 256$ or 2×256

Animals at the Zoo

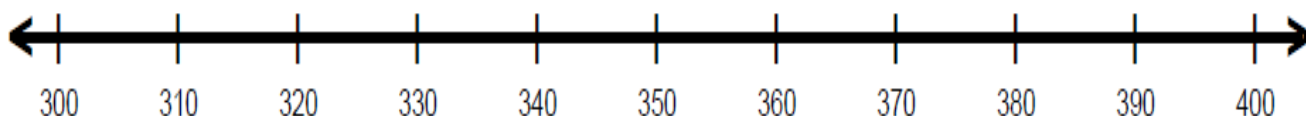


Animal Weights

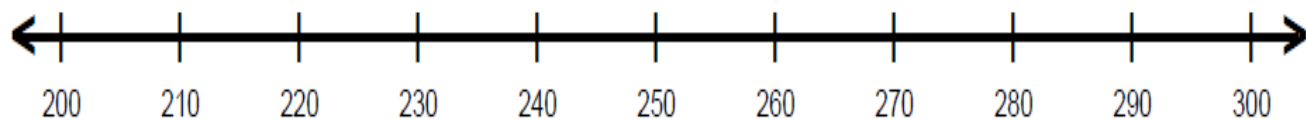
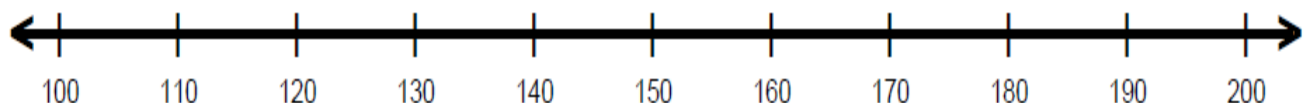
	Panda 	Lion 	Andean Bear 	Orangutan 
Adult Male	248 pounds	549 pounds	336 pounds	180 pounds
Adult Female	189 pounds	395 pounds	178 pounds	108 pounds

Animals at the Zoo

1.) What animal weighs about 400 pounds when their weight is rounded to the nearest hundred? Use the number line to show how you know.



2.) Which animals weigh about 200 pounds? Use the number line to show how you know.

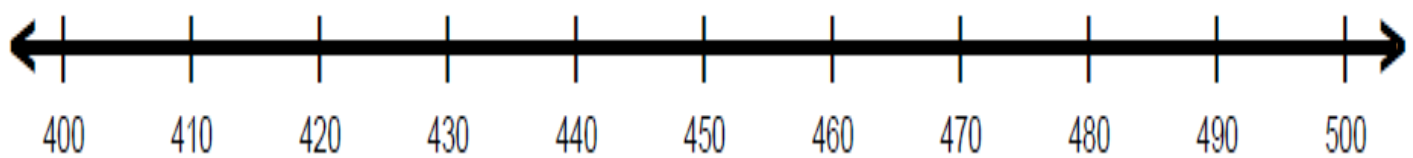
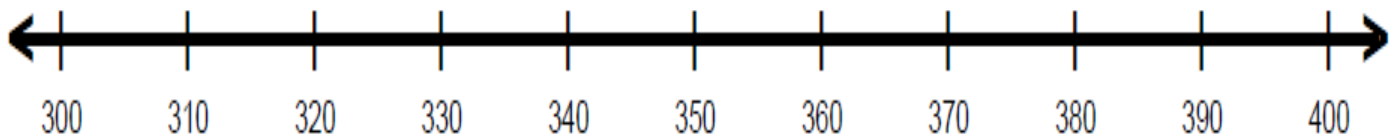
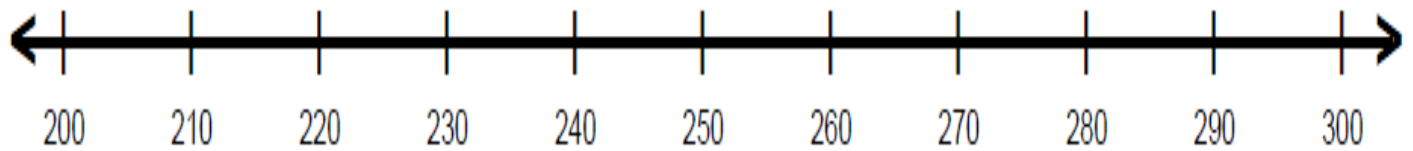
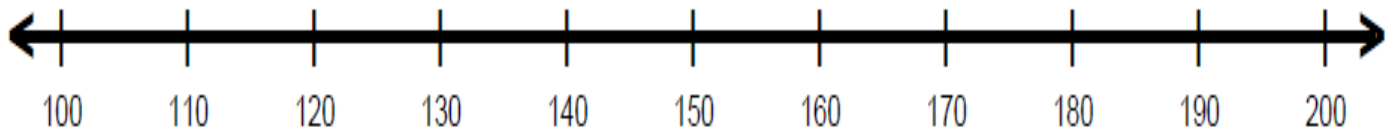
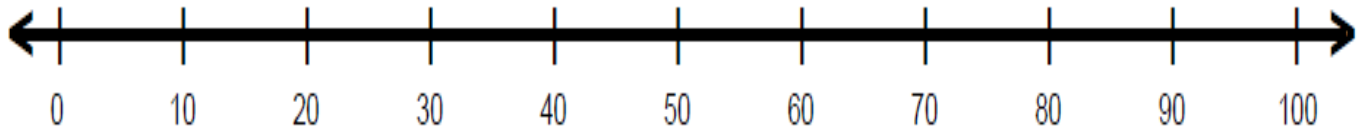


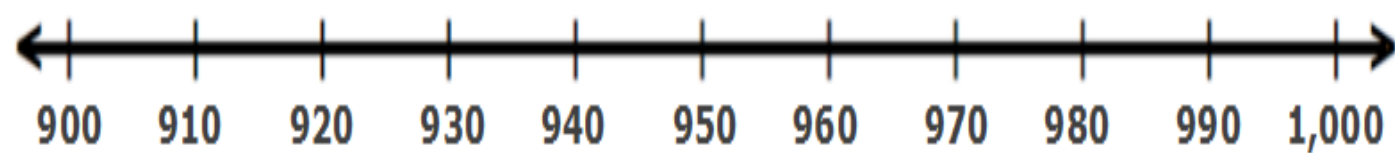
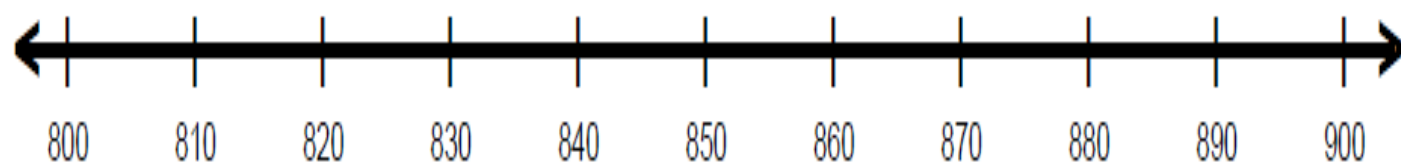
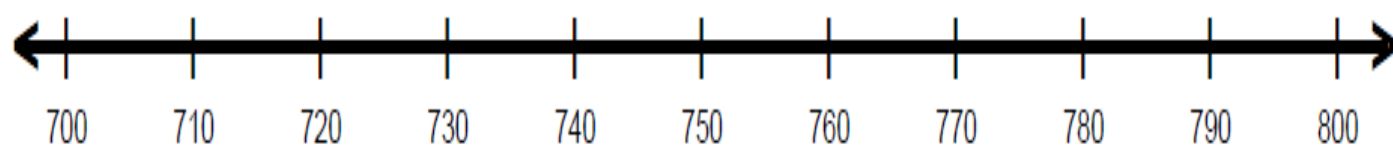
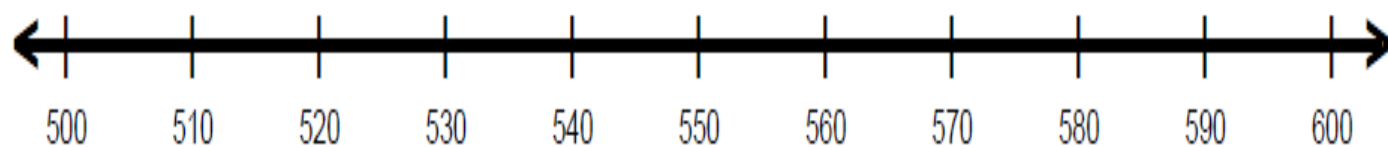
3.) Kasey said an adult male Andean Bear weighs about 400 pounds. Do you agree or disagree with Kasey? Explain.



4.) Adult male gorillas weigh about 400 pounds. What could be the exact weight of a male gorilla at the National Zoo? Can you think of another exact weight for the male gorilla? Show and explain how you know.

My Hundreds Number Lines





MY HUNDREDS CHARTS

0-100

0

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

100-200

100

101	102	103	104	105	106	107	108	109	110
111	112	113	114	115	116	117	118	119	120
121	122	123	124	125	126	127	128	129	130
131	132	133	134	135	136	137	138	139	140
141	142	143	144	145	146	147	148	149	150
151	152	153	154	155	156	157	158	159	160
161	162	163	164	165	166	167	168	169	170
171	172	173	174	175	176	177	178	179	180
181	182	183	184	185	186	187	188	189	190
191	192	193	194	195	196	197	198	199	200

200-300

200

201	202	203	204	205	206	207	208	209	210
211	212	213	214	215	216	217	218	219	220
221	222	223	224	225	226	227	228	229	230
231	232	233	234	235	236	237	238	239	240
241	242	243	244	245	246	247	248	249	250
251	252	253	254	255	256	257	258	259	260
261	262	263	264	265	266	267	268	269	270
271	272	273	274	275	276	277	278	279	280
281	282	283	284	285	286	287	288	289	290
291	292	293	294	295	296	297	298	299	300

300-400

300

301	302	303	304	305	306	307	308	309	310
311	312	313	314	315	316	317	318	319	320
321	322	323	324	325	326	327	328	329	330
331	332	333	334	335	336	337	338	339	340
341	342	343	344	345	346	347	348	349	350
351	352	353	354	355	356	357	358	359	360
361	362	363	364	365	366	367	368	369	370
371	372	373	374	375	376	377	378	379	380
381	382	383	384	385	386	387	388	389	390
391	392	393	394	395	396	397	398	399	400

400-500

400

401	402	403	404	405	406	407	408	409	410
411	412	413	414	415	416	417	418	419	420
421	422	423	424	425	426	427	428	429	430
431	432	433	434	435	436	437	438	439	440
441	442	443	444	445	446	447	448	449	450
451	452	453	454	455	456	457	458	459	460
461	462	463	464	465	466	467	468	469	470
471	472	473	474	475	476	477	478	479	480
481	482	483	484	485	486	487	488	489	490
491	492	493	494	495	496	497	498	499	500

500-600

500

501	502	503	504	505	506	507	508	509	510
511	512	513	514	515	516	517	518	519	520
521	522	523	524	525	526	527	528	529	530
531	532	533	534	535	536	537	538	539	540
541	542	543	544	545	546	547	548	549	550
551	552	553	554	555	556	557	558	559	560
561	562	563	564	565	566	567	568	569	570
571	572	573	574	575	576	577	578	579	580
581	582	583	584	585	586	587	588	589	590
591	592	593	594	595	596	597	598	599	600

600-700

600

601	602	603	604	605	606	607	608	609	610
611	612	613	614	615	616	617	618	619	620
621	622	623	624	625	626	627	628	629	630
631	632	633	634	635	636	637	638	639	640
641	642	643	644	645	646	647	648	649	650
651	652	653	654	655	656	657	658	659	660
661	662	663	664	665	666	667	668	669	670
671	672	673	674	675	676	677	678	679	680
681	682	683	684	685	686	687	688	689	690
691	692	693	694	695	696	697	698	699	700

700-800

700

701	702	703	704	705	706	707	708	709	710
711	712	713	714	715	716	717	718	719	720
721	722	723	724	725	726	727	728	729	730
731	732	733	734	735	736	737	738	739	740
741	742	743	744	745	746	747	748	749	750
751	752	753	754	755	756	757	758	759	760
761	762	763	764	765	766	767	768	769	770
771	772	773	774	775	776	777	778	779	780
781	782	783	784	785	786	787	788	789	790
791	792	793	794	795	796	797	798	799	800

800-900

800

801	802	803	804	805	806	807	808	809	810
811	812	813	814	815	816	817	818	819	820
821	822	823	824	825	826	827	828	829	830
831	832	833	834	835	836	837	838	839	840
841	842	843	844	845	846	847	848	849	850
851	852	853	854	855	856	857	858	859	860
861	862	863	864	865	866	867	868	869	870
871	872	873	874	875	876	877	878	879	880
881	882	883	884	885	886	887	888	889	890
891	892	893	894	895	896	897	898	899	900

900-1,000

900

901	902	903	904	905	906	907	908	909	910
911	912	913	914	915	916	917	918	919	920
921	922	923	924	925	926	927	928	929	930
931	932	933	934	935	936	937	938	939	940
941	942	943	944	945	946	947	948	949	950
951	952	953	954	955	956	957	958	959	960
961	962	963	964	965	966	967	968	969	970
971	972	973	974	975	976	977	978	979	980
981	982	983	984	985	986	987	988	989	990
991	992	993	994	995	996	997	998	999	1,000

Exit Ticket

A tiger's exact weight is 662 pounds. Use a rounded number to describe the Tiger's weight. Draw a number line model to explain why the rounded number describes the Tiger's weight.



Animal Weight Webquest

Directions:

- Make a list of 10 different animals you would like to see, or find interesting.
- Predict how much you think each animal weighs.
- Conduct an online search or use classroom books to find the weight of each animal on your list.
- Record the exact weight of the animal in the chart.
- Then write a rounded number to describe each animal's weight on the chart.
- Answer the questions.
- Write five true/false statements about the animals rounded weights.

Animal	Prediction	Actual Weight	Rounded Weight
1.)			
2.)			
3.)			
4.)			
5.)			
6.)			
7.)			
8.)			
9.)			
10.)			

1.) Did you round each animal's weight to the nearest ten or nearest hundred? Explain how you know.

2.) Were any of your rounded animal weights the same? If so, which animals had the same rounded weights and why were they the same?

3.) Which animal weights surprised you the most?

4.) Which two animals have a combined weight closest to 500 pounds? How do you know?

5.) Which animal weights in your chart could you combine to get a sum close to 1,000 pounds? Show your work and explain your thinking.

Animal Webquest True/False Statements

Example:

True or False: An Alaskan male wolf weighs about 100 pounds.

1.) True or False: _____

2.) True or False: _____

3.) True or False: _____

4.) True or False: _____

5.) True or False: _____

Name: _____
Date: _____

1. 5 Rounding Top-It

Lesson Objective: I can round numbers to the nearest 100 using a number line.

Mathematical Practice(s):

- MP.6 Use appropriate tools strategically.
- MP. 8 Look for and express regularity in repeated reasoning.

Essential Question(s):

- What is a rounded number?
- What does it mean to round numbers?
- What tools can we use to help us round numbers?

Vocabulary:

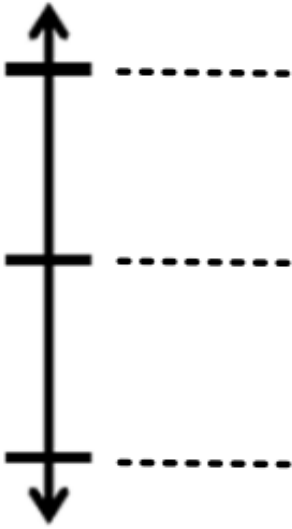
	Definition	Graphic/Visual
Nearest Hundred	When rounding a number to the nearest hundred, you are deciding which multiple of 100 it is closest to	
Midpoint (Halfway Number)	The number in the middle, or halfway between a starting and ending number.	

Math Huddle

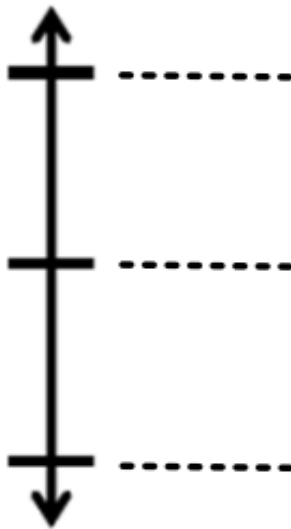
Rounding Top It!

Round	Greatest 3-digit Number	Between ___ and ___	Rounded to Nearest Hundred
1	432	between 400 and 500	400
2		between ___ and ___	
3		between ___ and ___	
4		between ___ and ___	
5		between ___ and ___	
6		between ___ and ___	
7		between ___ and ___	
8		between ___ and ___	
Total			

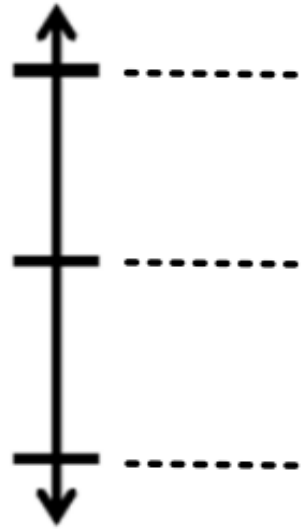
Vertical Number Lines



_____ \approx _____



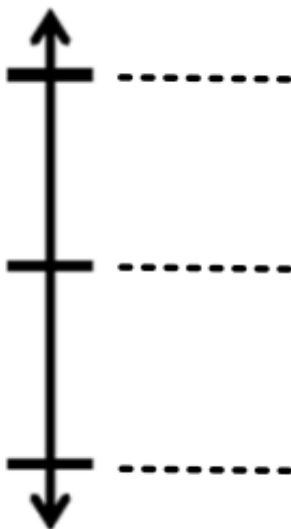
_____ \approx _____



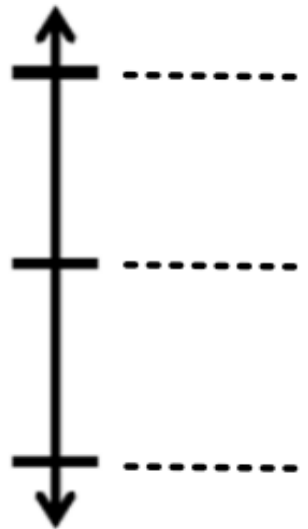
_____ \approx _____



_____ \approx _____



_____ \approx _____



_____ \approx _____

Horizontal Number Lines



_____ \approx _____



_____ \approx _____



_____ \approx _____

Math Journal

Henry saw the new Playstation 4 he wanted for his birthday at the store. The exact price of the Playstation 4 was \$379. Henry told his mother the Playstation 4 cost about \$400. Explain why what Henry told his mother is correct.

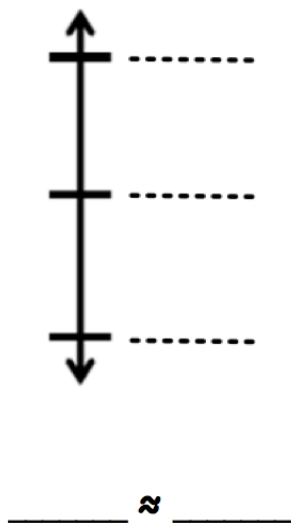
Rounding to the Nearest Hundred

Everybody Writes

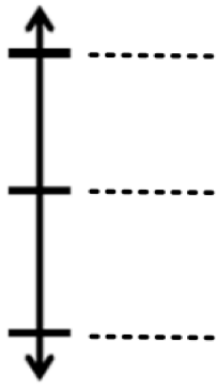
Predict the weight of a bag of marshmallows. Explain how you thought about your prediction.

U.S. or Customary Units of Weight	Metric Units

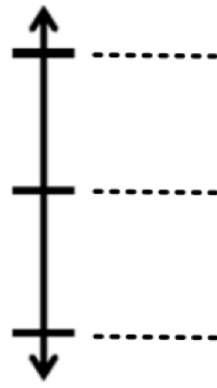
A bag of marshmallows weighs _____



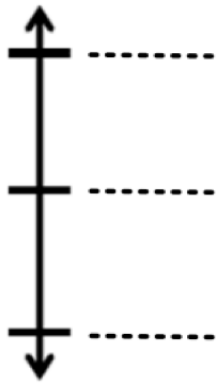
201	202	203	204	205	206	207	208	209	210
211	212	213	214	215	216	217	218	219	220
221	222	223	224	225	226	227	228	229	230
231	232	233	234	235	236	237	238	239	240
241	242	243	244	245	246	247	248	249	250
251	252	253	254	255	256	257	258	259	260
261	262	263	264	265	266	267	268	269	270
271	272	273	274	275	276	277	278	279	280
281	282	283	284	285	286	287	288	289	290
291	292	293	294	295	296	297	298	299	300



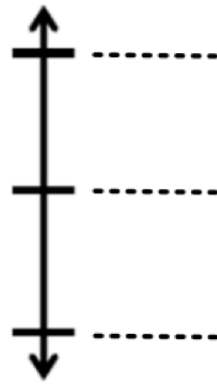
_____ \approx _____



_____ \approx _____



_____ \approx _____



_____ \approx _____

Name: _____

Date: _____

1.6 Rounds to 500

Lesson Objective: I can give examples of numbers that would round to a given nearest hundred by using number lines and/or hundreds charts.

Mathematical Practice(s):

- MP.1 Make sense of problems and persevere in solving them.
- MP. 8 Look for and express regularity in repeated reasoning.

Essential Question(s):

- What tools can we use to help us round numbers?
- What patterns do we notice when rounding numbers?

Vocabulary:

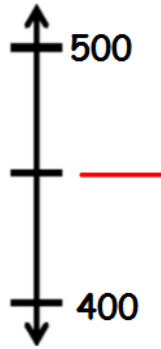
	Definition	Graphic/Visual
Round	When you round a number, you change the number to a more convenient “close to” number to make it easier to work with; rounded whole numbers will end with zero	
Multiples of 100	The numbers we say when we count by hundreds; 100, 200, 300, 400, 500, 600, 700, 800, 900, 1,000, 1,100, 1,200, 1,300...	
Nearest Hundred	When rounding a number to the nearest hundred, you are deciding which multiple of 100 it is closest to	
Generalization	A rule or pattern that is always true	

Math Huddle

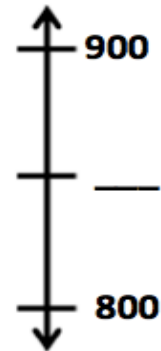
- What is the **smallest** whole number that will round to 500?
- What is the **largest** whole number that will round to 500?
- How many different whole numbers will round to 500?

Rounding to the Nearest Hundred

1.) Write the number that is halfway between 400 and 500.

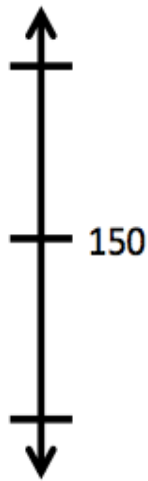


2.) Write the number that is halfway between 800 and 900.



3.) Round to the nearest hundred.

143 \approx _____



4.) Round to the nearest hundred.

286 \approx _____



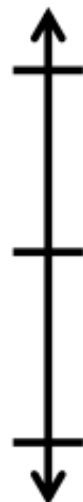
5.) Round to the nearest hundred.

320 \approx _____



6.) Round to the nearest hundred.

804 \approx _____



7.) Round to the nearest hundred.

260 \approx _____



8.) Round to the nearest hundred.

342 \approx _____



9.)

761 \approx _____



10.)

137 \approx _____



11.) A bottle of juice holds 386 milliliters.
Round the capacity to the nearest 100
milliliters.



12.) A book weighs 727 grams. Round the
weight to the nearest 100 grams.



13.) Complete the chart.

a. Shauna has 480 stickers. Round the number of stickers to the nearest hundred.	
b. There are 525 pages in a book. Round the number of pages to the nearest hundred.	
c. A container holds 750 milliliters of water. Round the capacity to the nearest 100 milliliters.	
d. Glen spends \$1,297 on a new computer. Round the amount Glen spends to the nearest \$100.	
e. The drive between two cities is 1,842 kilometers. Round the distance to the nearest 100 kilometers.	

14.) Circle the numbers that round to 600 when rounding to the nearest hundred.

527 550 639 681 713 603

15.) The teacher asks students to round 1,865 to the nearest hundred. Christian says that it is one thousand, nine hundred. Alexis disagrees and says it is 19 hundreds. Who is correct? Explain your thinking.

ROUNDING TIC-TAC-TOE

1,000	600	300	500
500	200	400	200
900	100	700	800
800	100	300	400

Directions:

- 1.) Select a number from the below box.
- 2.) Round the number to the nearest ten.
- 3.) Find the rounded number that matches your answer on the tic-tac-toe board above.
- 4.) Put your **X** or **O** on the rounded number on the tic-tac-toe board. You may only put your mark on one number on the tic-tac-toe board, even if it appears more than once.
- 5.) The first player to have four in a row wins!

96	889	750	237
271	121	536	619
384	725	181	332
841	978	444	458

Rounding to 500 Task

When rounding to the nearest ten:

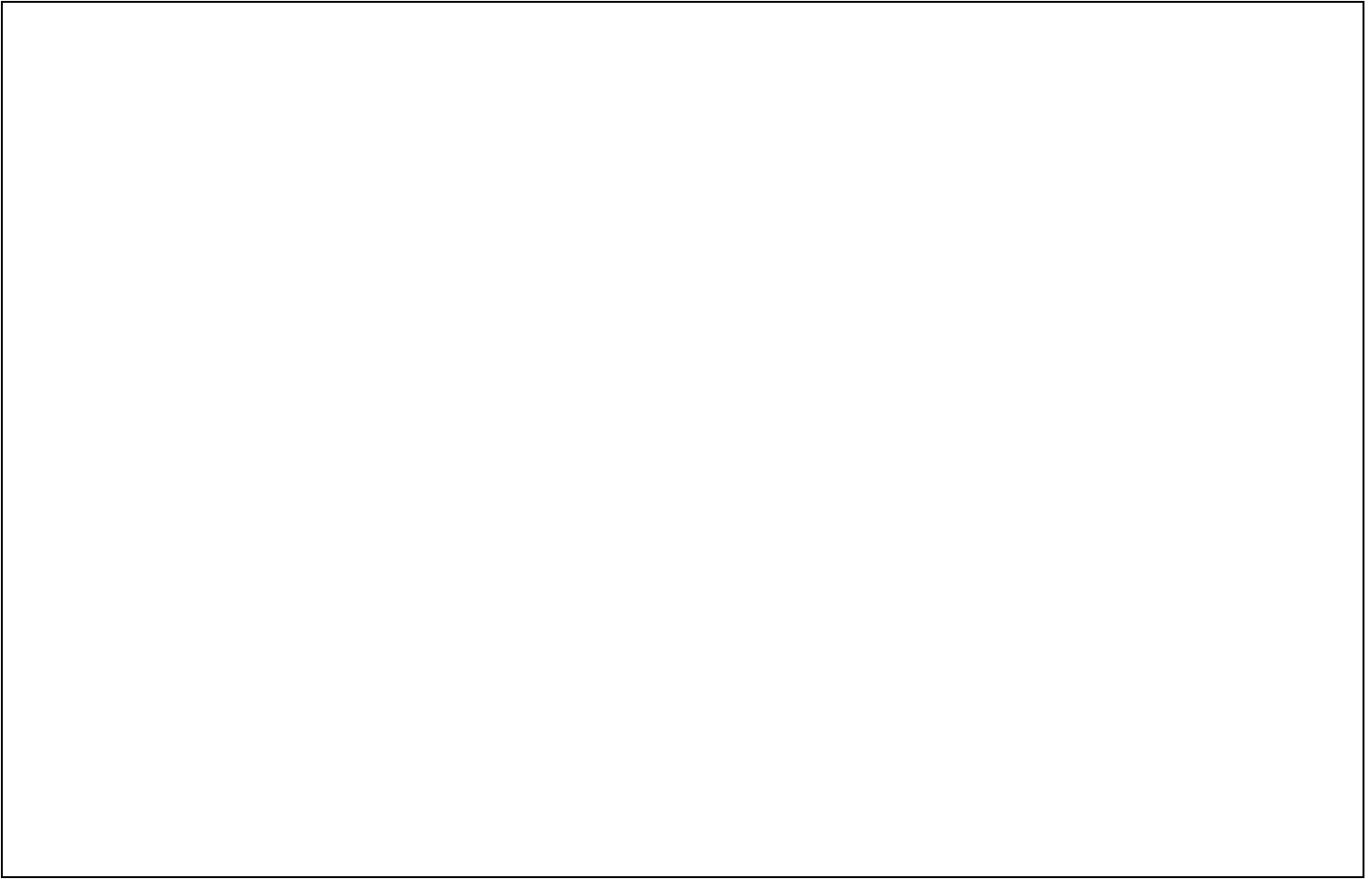
- What is the **smallest** whole number that will round to 500? Use models, numbers, and words to explain how you know.
- What is the **largest** whole number that will round to 500? Use models, numbers, and words to explain how you know.
- How many different whole numbers will round to 500? Use models, numbers, and words to explain how you know.

Be sure you answer each question.

This image shows a single page of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page, typical of notebook paper. There are no margins, text, or other markings on the page.

Exit Ticket

There are 685 people at the basketball game. Draw a number line to round the number of people to the nearest hundred people. Explain how your number line shows your solution.



Name: _____

Date: _____

1.7 Bake Sale

Lesson Objective: I can round three-digit numbers to the nearest 10 and 100 using number lines and rounding trees.

Mathematical Practice(s):

- MP.6 Use appropriate tools strategically.
- MP. 8 Look for and express regularity in repeated reasoning.

Essential Question(s):

- What tools can we use to help us round numbers?
- What is a rounded number?
- What does it mean to round numbers?

Vocabulary:

	Definition	Graphic/Visual
Nearest Ten	When rounding a number to the nearest ten, you are deciding which multiple of 10 it is closest to	
Nearest Hundred	When rounding a number to the nearest hundred, you are deciding which multiple of 100 it is closest to	
Midpoint (Halfway Number)	The number in the middle, or halfway between a starting and ending number.	

Math Huddle

There were 148 fish in an aquarium. Kimora said there were about 150 fish. Farrah said there were about 100 fish. Who was correct? How do you know?

Holiday Bake Sale Task



The Middle School had a holiday bake sale to raise money for a local animal shelter. Help the third graders figure out how much money they have earned so far by answering the questions below.

A.) The students earned \$394 selling cakes from the bake sale. What is the amount the students earned rounded to the **nearest ten**? What is the amount the students earned rounded to the **nearest hundred**?

Nearest Ten

Nearest Hundred

B.) The students earned \$236 selling cookies at the bake sale. What is the amount the students earned rounded to the **nearest hundred**? What is the amount the students earned rounded to the **nearest ten**?

Nearest Ten

Nearest Hundred

C.) The students earned \$352 selling pies. Genisus said the students earned about \$350. Did Genisus round to the **nearest ten** or the **nearest hundred**?

D.) The students earned \$129 selling cupcakes. Tim if you round the amount of cupcake money to the **nearest ten** it would be \$100. Explain Tim's mistake.

E.) About how much money did the students raise for the animal shelter selling cakes, cookies, pies, and cupcakes at the holiday bake sale? Show how you figured it out.

Everybody Writes

There were 148 fish in an aquarium. Kimora said there were about 150 fish. Farrah said there were about 100 fish. Who was correct? How do you know?

Exit Ticket

A 3-digit number has the digits 2, 5, and 7. To the nearest hundred, it rounds to 800. To the nearest ten it rounds to 750. What is the number? Justify your solution.

Pennies for Patients Problem

The table below shows the number of pennies 3 students collected for the Pennies for Patients drive.

Pennies for Patients		
Jamal	Simone	Gabby
779	833	751

Simone said, "When I round all of these numbers, I get the same answer."

Gabby said, "I disagree. I get all different numbers."

Can they both be correct? Explain your reasoning using numbers, words, and number line models.

Name: _____

Date: _____

1.8 Estimate vs. Exact

Lesson Objective: I can estimate sums by rounding.

Mathematical Practice(s):

- MP.1 Make sense of problems and persevere in solving them.
- MP.6 Use appropriate tools strategically.

Essential Question(s):

- What tools can we use to help us round numbers?
- What is a rounded number?
- What does it mean to round numbers?

Vocabulary:

	Definition	Graphic/Visual
Estimate	Not an exact answer, but a “close to” answer often based on rounding. We make estimates to help us decide if an exact answer is reasonable or to quickly calculate an answer in our heads	
Approximately	Not exact, but close enough to be used; we use the symbol \approx to mean an amount is approximate	
Sum	The answer you get when you add two or more numbers. In the addition equation $4 + 2 = 6$, the 6 is the sum.	

Math Huddle

- Which addends were easier, or more efficient for you to add, the rounded or exact addends? Why do you think this is?
- Did you get more precise sums by rounding to the nearest 100 or the nearest 10? Why do you think this is?
- Are there any estimates that were not close to your exact sum? Why do you think this is?

Rally Robin Estimation

My Number	Partner's Number	Estimate #1	Estimate #2	Exact Sum
<i>Example</i> 362	159	$400 + 200 = 600$	$360 + 160 = 520$	$362 + 159 = 521$

1.) Which estimated sum is closest to the exact sum? Why do you think this is?







2.) Which estimated sum is farthest from the exact sum? Why do you think this is?

Using Rounding to Estimate

After listening to the story, write what you think an estimate is in your own words.

An estimate is....	An estimate is not....
--------------------	------------------------

Decide if you would rather estimate or find the exact amount in each picture.

 <p>Number of people at President Obama's inauguration address</p> <p>Exact Estimate</p>	 <p>Amount of medicine you need</p> <p>Exact Estimate</p>	 <p>Number of cupcakes for your birthday party</p> <p>Exact Estimate</p>
 <p>Amount of money you have in your savings account</p> <p>Exact Estimate</p>	 <p>Number of pennies in a penny jar</p> <p>Exact Estimate</p>	 <p>Amount of water you drink in 1 day</p> <p>Exact Estimate</p>

Estimate the sum of _____ and _____.

Estimate #1	Estimate #2	Estimate #3

Which estimate do you think will be closest to the exact sum? Explain your thinking.

Exact Sum

Estimate #_____ gave us the closest, or most precise estimate because....

Estimating Sums Practice Sets

1.) Find the actual sum either on paper or using mental math. Round each addend to the nearest hundred, and find the estimated sums.

A

$$451 + 253 = \underline{\hspace{2cm}}$$

$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$451 + 249 = \underline{\hspace{2cm}}$$

$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$448 + 249 = \underline{\hspace{2cm}}$$

$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

Circle the estimated sum that is the closest to its real sum.

B

$$356 + 161 = \underline{\hspace{2cm}}$$

$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$356 + 148 = \underline{\hspace{2cm}}$$

$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$347 + 149 = \underline{\hspace{2cm}}$$

$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

Circle the estimated sum that is the closest to its real sum.

C

$$652 + 158 = \underline{\hspace{2cm}}$$

$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$647 + 158 = \underline{\hspace{2cm}}$$

$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$647 + 146 = \underline{\hspace{2cm}}$$

$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

Circle the estimated sum that is the closest to its real sum.

Look at the sums that gave the most precise estimates. Explain below what they have in common. You might use a number line to support your explanation.

2.) Janet watched a movie that is 94 minutes long on Friday night. She watched a movie that is 151 minutes long on Saturday night.

- Decide how to round the minutes. Then, estimate the total minutes Janet watched movies on Friday and Saturday.
- How much time did Janet actually spend watching movies?
- Explain whether or not your estimated sum is close to the actual sum. Round in a different way, and see which estimate is closer.

3.) Sadie, a bear at the zoo, weighs 182 kilograms. Her cub weighs 74 kilograms.

- Estimate the total weight of Sadie and her cub using whatever method you think best.
- What is the actual weight of Sadie and her cub? Model the problem with a tape diagram.

4.) Jesse practices the trumpet for a total of 165 minutes during the first week of school. He practices for 245 minutes during the second week.

- Estimate the total amount of time Jesse practices by rounding to the nearest 10 minutes.
- Estimate the total amount of time Jesse practices by rounding to the nearest 100 minutes.
- Explain why the estimates are so close to each other.

Math Journal

The art teacher has a stack of construction paper left over in her closet. She wonders how many red, purple, and blue sheets she has. Should she make an exact count or an estimate of how much construction paper she has?

Circle One: Exact Count Estimate

Explain your thinking.

If the art teacher counted 48 red sheets and 16 purple sheets in the closet, would 514 be a reasonable estimate for the total number of red and purple sheets she has in the closet? Explain.

Kiki's Estimate

Kiki estimated the sum of two numbers to be 140. What might have been the numbers she added? Explain your thinking.

What are two different numbers Kiki might have added?

Name: _____

Date: _____

1.9 Writing RAISE Responses

Lesson Objective: I can compare estimation strategies.

I can write a brief constructed response using the RAISE strategy.

Mathematical Practice(s):

- MP.1 Make sense of problems and persevere in solving them.
- MP.6 Use appropriate tools strategically.

Essential Question(s):

- How do we know if an answer we get to a problem is reasonable?
- What is estimation?
- How do we estimate answers?
- Why do we estimate answer?

Vocabulary:

	Definition	Graphic/Visual
Estimate	Not an exact answer, but a “close to” answer often based on rounding. We make estimates to help us decide if an exact answer is reasonable or to quickly calculate an answer in our heads	
Approximately	Not exact, but close enough to be used; we use the symbol \approx to mean an amount is approximate	
Sum	The answer you get when you add two or more numbers. In the addition equation $4 + 2 = 6$, the 6 is the sum.	

Math Huddle

- How do you know your combined heights would be about 400 cm?
- Did you add the heights first, or did you round the heights first? Why?

Combined Height Task

Everybody Writes

How tall do you think you are? How do you know?

I think I am _____ because _____

My actual height is _____.

Find 2 other teammates with heights that when combined with your height would be about _____.
Show how you know your combined heights would be about _____.

Workspace

Dave & Buster Tickets

Isaiah, Antonio, and Dacari are counting how many tickets they have won at Dave & Busters so far. They wrote how many tickets they have in the table.

Name	Number of Tickets
Isaiah	134
Antonio	485
Dacari	355

Isaiah adds all the numbers of tickets together and then rounds the sum to the nearest 10. Antonio rounds each number of tickets to the nearest 10 and then adds them together. Do Isaiah and Antonio get the same amount? Prove your answer.

Work Space

Explain how your work supports your answer

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and extend across the width of the page. There are no margins, text, or other markings on the paper.

Tyler measured the playground fence height and found it was 350 cm. He wants to use the heights of the students in his class to find 3 students whose combined heights are about the same as fence height. Which students' heights could Tyler combine to get a sum of about 350 cm? Prove your answer.

Tyler	M.J.	Ryan	Jazion	Romello	Jontez	Farrah	Aulajah	Taylor
127 cm.	121 cm.	111 cm.	101 cm.	137 cm.	132 cm.	152 cm.	116 cm.	157 cm.

Restate the Question

Answer the Question

I know because....

Show your equations and work

Explain how your work supports your answer

Writing About Math

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

Estimating Differences Practice Set

1.) Find the actual differences either on paper or using mental math. Round each total and part to the nearest hundred and find the estimated differences.

$$448 - 153 = \underline{\hspace{2cm}}$$

$$\underline{\hspace{2cm}} - \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$451 - 153 = \underline{\hspace{2cm}}$$

$$\underline{\hspace{2cm}} - \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$448 - 149 = \underline{\hspace{2cm}}$$

$$\underline{\hspace{2cm}} - \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$451 - 149 = \underline{\hspace{2cm}}$$

$$\underline{\hspace{2cm}} - \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

Circle the estimated differences that are the closest to the actual differences.

$$747 - 261 = \underline{\hspace{2cm}}$$

$$\underline{\hspace{2cm}} - \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$756 - 261 = \underline{\hspace{2cm}}$$

$$\underline{\hspace{2cm}} - \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$747 - 249 = \underline{\hspace{2cm}}$$

$$\underline{\hspace{2cm}} - \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

$$756 - 248 = \underline{\hspace{2cm}}$$

$$\underline{\hspace{2cm}} - \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

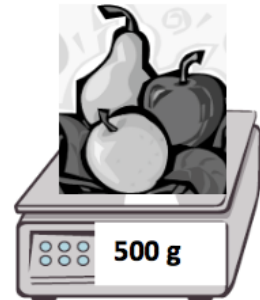
Circle the estimated differences that are the closest to the actual differences.

Look at the differences that gave the most precise estimates. Explain below what they have in common. You might use a number line to support your explanation.

2.) Camden uses a total of 372 liters of gas in two months. He uses 184 liters of gas in the first month.

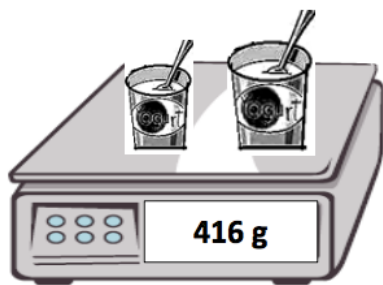
- Estimate the amount of gas Camden uses in the second month by rounding each number as you think best.
- How many liters of gas does Camden actually use in the second month? Model the problem with a tape diagram.

3.) The weight of a pear, apple, and peach are shown to the right. The pear and apple together weigh 372 grams. How much does the peach weigh?



- Estimate the weight of the peach by rounding each number as you think best. Explain your choice.
- How much does the peach actually weigh? Model the problem with a tape diagram.

4.) Kathy buys a total of 416 grams of frozen yogurt for herself and a friend. She buys 1 large cup and 1 small cup.



Large Cup	363 grams
Small Cup	? grams

- Estimate how many grams are in the small cup of yogurt by rounding.
- Estimate how many grams are in the small cup of yogurt by rounding in a different way.
- How many grams are actually in the small cup of yogurt?
- Is your answer reasonable? Which estimate was closer to the exact weight? Explain why.

Working with Whole Numbers

1.10 Rounding and Estimation Task

Colleen's Calorie Count Task

Colleen learned about healthy eating in school. She looked up the calories for the foods she liked to eat for breakfast so she could figure out how many calories she ate during her breakfast this morning.

Part A

The table below shows the calories in a serving of some breakfast foods that Colleen enjoys eating. Round the calories in each item to the nearest ten.

Food	Calories Per Serving	Calories Rounded to Tens Place	Number of Servings Eaten	Total Calories (Rounded)
<i>Egg</i>	72		2	
<i>Waffle</i>	94		0	
<i>Yogurt</i>	76		1	
<i>Fruit Salad</i>	74		1	
<i>Orange Juice</i>	92		1	
<i>Milk</i>	85		0	
Total Calories				

Part B

Use the rounded calorie count to find out about how many calories Colleen ate during this morning's breakfast. Show your work.

Part C

Colleen's teacher said that a breakfast for children her age should total about 500 calories. If Colleen's breakfast is less than 500 calories, is there something else she could add to her breakfast? If Colleen's breakfast is over 500 calories, what should she eliminate from her breakfast?

Part D

Colleen learned about healthy eating in school. She learned that her lunch should contain a total of about 500 calories.

- The table below shows the calories in a serving of some lunch foods that Colleen enjoys eating. Round the calories in each item to the nearest ten.
- In each of the tables below, plan a lunch that has about 500 calories. How many servings of each item will each meal contain?

Food	Calories Per Serving	Calories Rounded to Tens Place	Number of Servings Eaten	Total Calories (Rounded)
<i>Salad</i>	63			
<i>Yogurt</i>	76			
<i>Orange</i>	39			
<i>Cheese</i>	94			
<i>Crackers</i>	88			
<i>Turkey</i>	82			
<i>Juice</i>	63			
<i>Milk</i>	85			
Total Calories				

Food	Calories Per Serving	Calories Rounded to Tens Place	Number of Servings Eaten	Total Calories (Rounded)
<i>Salad</i>	63			
<i>Yogurt</i>	76			
<i>Orange</i>	39			
<i>Cheese</i>	94			
<i>Crackers</i>	88			
<i>Turkey</i>	82			
<i>Juice</i>	63			
<i>Milk</i>	85			
Total Calories				

Colleen's Calorie Count

Unit 1 Performance Task

After learning about healthy eating, you want to plan a dinner that has about 700 calories.

- 📖 Choose the foods you will include in your dinner. List them in the table.
- 📖 Look up the calories that are in each food. List the calorie count in the table.
- 📖 Round the calories in each item.
- 📖 Choose how many servings of each item you will include in your meal.
- 📖 Determine how many calories are in your entire meal.

Food	Calories Per Serving	Calories Rounded	Number of Servings Eaten	Total Calories (Rounded)

Reflection Questions

1.) Did you round the calories in your food items to the nearest ten or the nearest hundred? Explain why you decided to round the calories in each food item to the nearest ten or nearest hundred.

2.) Use pictures, numbers, and words to explain how you know your meal has about 700 calories.

3.) Is your meal a healthy meal? Explain why or why not.

4.) How does the serving size affect the number of calories per serving?

	4- Advanced Problem Solver	3- Accomplished Problem Solver	2- Emerging Problem Solver	1- Beginning Problem Solver	Student Score	Teacher Score
Demonstrates understanding of the Big Idea	I correctly identified which place I rounded to and why I chose to round to that place. I explained how I used rounding to prove my meal was close to 700 calories using numbers, pictures, and words.	I correctly identified which place I rounded to, but may not have clearly explained why I chose to round to that place. I explained how I used rounding to prove my meal was close to 700 calories using pictures or numbers.	I attempted to identify which place I rounded to, but did not explain why I chose to round to that place. I attempted to explain how I used rounding to prove my meal was close to 700 calories using pictures.	My solution does not identify to which place I rounded. I did not explain how I used rounding to prove my meal was close to 700 calories using pictures.		
Makes sense of problems and perseveres in solving them	I read and answered all parts of the problem and stayed focused on finding a solution. If I encountered difficulty, I was able to work through it.	I read and answered most parts of the problem and stayed focused on finding a solution. If I encountered difficulty, I was able to work through it with some peer support.	I had some difficulty understanding the problem, or did not answer all parts of the problem. When I encountered difficulty, I was able to work through it with some teacher support.	I did not understand the problem, or did not answer all parts of the problem. I did not seek assistance. I did not persevere and did not finish the problem.		
Attends to precision	My computations were accurate. I labeled all of my solutions with the correct units. I used precise language in my explanations.	My computations were accurate. I labeled some of my solutions with units. I used some precise language in my explanation, but some language was imprecise.	Some of my computations were accurate. I did not label my solutions with units. I used some imprecise language in my explanation.	My computations contained many errors and/or are incomplete. I did not label my solutions with units. I did not explain my thinking.		
Utilizes appropriate strategies, models and tools	I independently determined appropriate strategies, models and tools and I applied them appropriately to solve the problem.	I asked for help in determining the best strategies, models and tools, and I used appropriate ones for the problem.	The strategies, models and tools I used were not appropriate for the problem.	I did not attempt to use strategies, models or tools to solve the problem.		

